DOCUMENT RESUME

ED 468 512 EA 030 739

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TITLE The Color of Discipline: Sources of Racial and Gender Disproportionality in School Punishment. Policy Research Report.

INSTITUTION Indiana Univ., Bloomington. Education Policy Center.
SPONS AGENCY Lilly Endowment, Inc., Indianapolis, IN.
REPORT NO RR-SRS1
PUB DATE 2000-06-00
NOTE 71p.
AVAILABLE FROM Indiana Education Policy Center, Smith Research Center, 100, 2805 East Tenth Street, Indiana University, Bloomington, IN 47408-2698. Tel: 812-855-1240; Fax: 812-855-0420; Web site: http://www.indiana.edu/~iepc/welcome.html. For full text: http://www.indiana.edu/~iepc/srs1.pdf.
PUB TYPE Reports - Research (143)
EDRS PRICE EDRS Price MF01/PC03 Plus Postage.
DESCRIPTORS Administrator Attitudes; *Blacks; *Discipline Policy; Educational Administration; Elementary Secondary Education; Punishment; *Racial Bias; School Policy; *Sex Bias; Teacher Attitudes

ABSTRACT

This paper explores gender, racial, and socioeconomic disparities in school discipline to test alternative hypotheses concerning disproportionate school discipline. Although disproportionate representation of minority students, especially African-Americans, in school disciplinary procedures has been documented almost continuously for 25 years, few researchers have examined the factors contributing to that disproportionality. In the study reported here, it was found that racial and gender discrepancies in school disciplinary outcomes were consistent regardless of the methodology employed, though socioeconomic disparities appeared to be less robust. There was no evidence that racial disparities disappear when controlling for poverty status; instead, disproportionality in suspension appeared to be due to prior disproportionality in referrals to the office. Although discriminant analysis suggests that disproportionate rates of office referral and suspension for boys are due to increased rates of misbehavior, no support was found for the hypothesis that African-American students act out more than other students. Rather, these students appear to be referred to the office for less serious and more subjective reasons. These results argue that disproportionate representation of African-Americans in office referrals, suspensions, and expulsions is evidence of a pervasive and systemic bias that may be inherent in the user of exclusionary discipline. (Contains 85 references.) (RJM)

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The Color of Discipline:

Sources of Racial and Gender

Disproportionality in School Punishment

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Policy Research Report #SRS1

June, 2000

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Abstract

Disproportionate representation of minority students, especially African Americans, in a variety of school disciplinary procedures has been documented almost continuously for the past 25 years, yet there has been little study of the factors contributing to that disproportionality. Whether disparate treatment of a group can be judged as bias depends largely on the extent to which other hypotheses that could provide a credible alternative explanation of the discrepancy can be ruled out. In this study, investigation of three alternative hypotheses led to different conclusions for disproportionate representation based on gender, race, and socioeconomic status. First, racial and gender discrepancies in school disciplinary outcomes were consistent regardless of methodology, but socioeconomic disparities appeared to be somewhat less robust. Second, we found no evidence that racial disparities disappear when controlling for poverty status; instead, disproportionality in suspension appears to be due to prior disproportionality in referrals to the office. Finally, although discriminant analysis suggests that disproportionate rates of office referral and suspension for boys are due to increased rates of misbehavior, no support was found for the hypothesis that African American students act out more than other students. Rather, African American students appear to be referred to the office for less serious and more subjective reasons. Coupled with extensive and highly consistent prior data, these results argue that disproportionate representation of African Americans in office referrals, suspension and expulsion is evidence of a pervasive and systematic bias that may well be inherent in the use of exclusionary discipline.

The Color of Discipline: Sources of Racial and Gender Disproportionality in School Punishment

The two-year expulsion of seven African American students for a football game brawl in Decatur, Illinois and the subsequent involvement of the Reverend Jesse Jackson and Operation PUSH in defending those students has brought the issue of racial disparities in school discipline to the forefront of national attention. As part of the court hearing for six of those students, extensive data regarding the disproportionate discipline of African American students both in Decatur and in large urban school systems throughout the country were highlighted (Gordon, Della Piana, & Keleher 2000). Despite a ruling in federal court that the Decatur School Board was within its rights in expelling the students, the incident has led to consideration of the general issues of zero tolerance and racial inequity in discipline by both the United States Commission on Civil Rights and Secretary of Education Richard Riley (Koch, 2000).

Minority overrepresentation in school punishment is by no means a new issue. Extensive investigations of school punishments over the past 25 years have been consistent in raising questions concerning socioeconomic and racial disproportionality in the administration of school discipline (e.g., Children's Defense Fund, 1975; McCarthy & Hoge, 1987; Skiba, Peterson, & Williams, 1997; Thornton & Trent, 1988; Wu, Pink, Crain, & Moles, 1982). The meaning of those statistics remains unclear, however. Despite extensive documentation of the existence of racial, socioeconomic, and gender disparities in school discipline data, there has been little systematic exploration of possible explanations for the disproportionality. The purpose of this investigation was to explore gender, racial, and socioeconomic disparities in school discipline in

sufficient detail to test alternative hypotheses concerning disproportionate school discipline.

Disproportionality by Socioeconomic Status

Studies of school suspension have consistently documented disproportionality by socioeconomic status (SES). Students who receive free school lunch are at increased risk for school suspension (Skiba et al., 1997; Wu et al., 1982). Wu et al. (1982) also found that students whose fathers did not have a full-time job were significantly more likely to be suspended than students whose fathers were employed full-time.

In a qualitative study of student reactions to school discipline, Brantlinger (1991) interviewed adolescent students from both high- and low-income residential areas concerning their reactions to school climate and school discipline. Both low- and high-income adolescents agreed that low-income students were more likely to be unfairly targeted by school disciplinary sanctions. There also appeared to be differences in the nature of punishment meted out to students of different social classes. While high-income students more often reported receiving mild and moderate consequences (e.g., teacher reprimand, seat reassignment), low-income students reported receiving more severe consequences, sometimes delivered in a less-than-professional manner (e.g., yelled at in front of class, made to stand in hall all day, search of personal belongings).

Disproportionality by Minority Status

Of particular concern in the administration of school discipline is the overrepresentation of minorities, especially African American[1] students, in the use of exclusionary and punitive consequences. In one of the earliest explorations of evidence concerning school suspension, the

Children's Defense Fund (1975) studied national data on school discipline provided by the U.S. Department of Education Office for Civil Rights (OCR), and reported rates of school suspension for black students that exceeded white students on a variety of measures. Rates of suspension for black students were between two and three times higher than suspension rates for white students at the elementary, middle, and high school levels. While 29 states suspended over 5 percent of their total black enrollment, only 4 states suspended 5 percent or more of white students. Finally, black students were more likely than white students to be suspended more than once, although no racial differences were found in the length of suspension administered.

Since that report, racial disproportionality in the use of school suspension has been a highly consistent finding (Costenbader & Markson, 1994; Costenbader & Markson, 1998; Glackman et al., 1978; Gregory, 1997; Kaeser, 1979; Lietz & Gregory, 1978; Massachusetts Advocacy Center, 1986; McCarthy & Hoge, 1987; McFadden, Marsh, Price, & Hwang, 1992; Skiba et al., 1997; Streitmatter, 1986; Taylor & Foster, 1986; Thornton & Trent, 1988; Wu et al., 1982). African American students are also more frequently exposed to harsher disciplinary strategies, such as corporal punishment (Gregory, 1996; Shaw & Braden, 1990), and are less likely to receive mild disciplinary alternatives when referred for an infraction (McFadden et al., 1992). Indeed, there is some suggestion that the relationship between the use of school discipline and minority disproportionality is linear. Overrepresentation of African American students in school suspension and expulsion appears to increase as those punishments are used more frequently (Advancement Project, 2000; Massachusetts Advocacy Center, 1986). Finally, while overrepresentation of

African American students in school exclusion does not appear to be dependent on the proportion of African American students enrolled, studies of recently desegregated schools have found that disproportionality in school suspension appears to increase immediately after school desegregation, especially in high socioeconomic status schools (Larkin, 1979; Thornton & Trent, 1988).

It has been suggested that the interpretation of disproportionality data may depend to some extent upon the way the data are presented, or upon the criterion applied to the data (MacMillan & Reschly, 1998; Reschly, 1997). Commenting upon minority overrepresentation in special education, Reschly (1997) notes that disproportionality data have been typically reported in two different ways, yielding percentages that differ dramatically. The first method compares the baseline distribution of the target group in the population with the distribution of that group in the category under study (e.g., African Americans represent 16% of general enrollment, but 24% of the enrollment in classes for students with mild mental retardation); the second is the absolute proportion of a population being served in a category (e.g., of the entire population of African American students, 2.1% are enrolled in programs for students with mild mental retardation). In addition, Reschly notes that investigations of disproportionality have used different criteria for judging whether a statistical discrepancy constitutes over or underrepresentation. Obviously, lack of clarity concerning which reporting method is being used will yield confusion, yet it is unclear whether simply changing the dimension of reporting will affect the conclusions drawn from a statistical analysis of the data.

Table 1 is a summary of the findings of studies investigating minority overrepresentation

in school suspension and expulsion since the Children's Defense Fund (1975) report. Studies are grouped by those that report the distribution of school punishments by race (e.g., proportion of all suspended students who were African American as compared to the proportion of African Americans in school or district enrollment), those that report the percentage of students in a given group who received a given disciplinary consequence (e.g., total percentage of African American students who were suspended), or other (e.g., mean differences). A common criterion for judging whether a group is disproportionately represented is the "ten percent of the population" standard (Reschly, 1997); that is, a subpopulation may be considered over- or under-represented if its proportion in the target classification (e.g. suspension) exceeds its representation in the population by 10% of that representation. Thus, if African American students constitute 20% of the population, they will be considered to be suspended disproportionately if more than 22% or less than 18% of students who were suspended were African American. All of the studies in Table 1 comparing proportion of population and proportion of students suspended report disproportionality statistics that meet or exceed this criterion. Indeed, all of the studies except one (Cooley, 1995) that have compared discipline by race have found overrepresentation of African Americans, regardless of the statistical criteria used. Fewer investigations have explored disciplinary disproportionality among students of other ethnic backgrounds, and those studies have yielded inconsistent results. While there appears to be overrepresentation of Latino students in some studies, the finding is not universal across locations or studies (see e.g., Gordon et al., 2000).

Disproportionality by Gender

There also appears to be consistent evidence of overrepresentation of boys in school disciplinary sanctions. In virtually every study presenting school disciplinary data by gender, boys are referred to the office and receive a range of disciplinary consequences at a significantly greater rate than girls (Lietz & Gregory, 1978; McFadden et al., 1992; Shaw & Braden, 1990; Skiba et al., 1997; Taylor & Foster, 1986). Indeed, a number of studies have found that boys are over four times as likely as girls to be referred to the office, suspended, or subjected to corporal punishment (Bain & MacPherson, 1990; Cooley, 1995; Gregory, 1996; Imich, 1994). There appears to be a gender by race interaction in the probability of being disciplined. Using U.S. Office of Civil Rights data from 1992, Gregory (1996) found that black males were 16 times as likely to be subjected to corporal punishment as white females. At both the junior and senior high school levels, Taylor and Foster (1986) reported a consistent ordering in the likelihood of suspension from most to least: black males, white males, black females, white females.

Explanations of Racial Disproportionality in Discipline

Given the consistency of the findings of minority overrepresentation across a number of measures of school discipline, it is surprising that relatively few investigations have sought to provide explanations for this disparity. Among those that have, two explanations have been offered. First, because students of color are over-represented in lower economic classes, disciplinary disproportionality may be an artifact of the overuse of discipline among low-income students. Second, disproportionality in discipline among students of color may in fact be a response to greater rates of disruptive behavior among those students.

Relationship to socioeconomic status. One possible explanation of racial

overrepresentation in school suspension is that overuse of suspension for black students is not racial bias per se, but is rather a corollary of the overuse of exclusionary school discipline for students from lower socioeconomic backgrounds. As noted, low SES has been consistently found to be a risk factor for school suspension (Brantlinger, 1991; Skiba et al., 1997; Wu et al., 1982). Yet race also appears to make a contribution to disciplinary outcome independent of socioeconomic status. Using a regression model controlling for socioeconomic status at the school level (percent of parents unemployed and percentage of students enrolled in free lunch program), Wu et al. (1982) reported that nonwhite students still reported significantly higher rates of suspension than white students in all locales except rural senior high schools.

Relationship of behavior and discipline. The possibility exists that higher rates of school exclusion and punishment for African American students are due to correspondingly high rates of disruptive behavior. In such a case, disproportionality in suspension or other punishments would not represent racial bias, but a relatively appropriate response to disproportionate misbehavior.

It is important to note that the overrepresentation of African Americans with respect to behavior-related consequences is not confined to school suspension, but appears to be part of a broader pattern common to both education and criminal justice. Gregory (1997) notes that, in addition to suspension, African American students, especially males, are disproportionally subjected to corporal punishment and disproportionally referred for special education service for emotional and behavioral disorders. Serwatka, Deering, and Grant (1995) reported that African American overrepresentation in such classes decreased as the representation of African

Americans among the school faculty increased, suggesting the possibility of bias in the referral process. Finally, the overrepresentation of young African American males in the juvenile justice system is well documented. Reports on state and city criminal justice practices have reported that African Americans are twice as likely to be the target of stop-and-frisk practices (New York State Attorney General's Office Civil Rights Bureau, 1999), five times more likely to be detained (Conley, 1994), and up to ten times as likely to be incarcerated (Mauer, 1997).

Despite the ubiquity of findings concerning the relationship between race and behavior-related consequences, investigations of behavior, race, and discipline have yet to provide evidence that African American students misbehave at a significantly higher rate. Whether based on school records (McFadden et al., 1992) or student interviews (McCarthy & Hoge, 1987), studies have failed to find racial disparities in misbehavior sufficient to account for the typically wide racial differences in school punishment. If anything, African American students appear to receive more severe school punishments for less severe behavior (McFadden et al., 1992; Shaw & Braden, 1990).

When Does Disproportionality Indicate Discrimination?

Questions about the sources of disproportionality in the application of school discipline relate to the central issue inherent in questions of overrepresentation: When does minority overrepresentation indicate bias? Although disciplinary disparities appear to be common, demonstrating that disproportionality represents discrimination or bias is highly complex. A direct survey of racial attitudes will probably fail to capture bias, since self-reports about disciplinary practices involving race or gender would likely be highly influenced by social

acceptability. Thus, determining whether a given measure of disproportionality represents bias is most likely a matter of ruling out alternative hypotheses that could account for overrepresentation.

For data concerning disparate rates of school punishment, three such alternative explanations might be offered. First, apparent differences between groups could be simply a statistical artifact, a product of the particular method of reporting the data. Measures of disproportionality are inconsistent across and even within studies, making it conceivable that apparent discrepancies are dependent upon a particular method of measurement. Second, racial or gender differences in office referrals, suspensions, or expulsions may be due primarily to the influence of SES. Race and socioeconomic status are unfortunately highly connected in American society (Duncan, Brooks-Gunn, & Klebanov, 1994), increasing the possibility that any finding of disproportionality due to race is in fact a product of disproportionality associated with SES. Finally, disproportionate representation in school discipline may be a product of corresponding disparities in disruptive behavior. Since school sanctions represent the intersection of a student behavior and the decision to punish that behavior; disproportionate rates of misbehavior among some target group (e.g., males) would support a conclusion that disproportionality is not bias, but rather an appropriate response to unacceptable behavior by members of that group.

The purpose of this investigation is explore racial, gender, and socioeconomic disparities in school discipline practice in sufficient detail to provide data on possible sources of disproportionate representation. In order to bring some consistency to measures of

disproportionality, the results of a number of different indices of disproportionality will be compared. More importantly, our analyses focused on the three alternative hypotheses above in order to explore the extent to which racial and gender overrepresentation in school disciplinary referrals are artifactual, or indicators of bias:

1. *To what extent is disproportionality in school discipline a function of variations in statistical methodology?*
2. *To what extent are disciplinary disparities by race or gender attributable to socioeconomic differences?*
3. *To what extent is disproportionality in school discipline a function of disproportionate rates of misbehavior among those groups disciplined more frequently?*

Method

Subjects

Subjects for this study were all middle school students in a large, urban Midwestern public school district. The district is located in one of the 15 largest cities in the United States, serving over 50,000 students.

The data reported herein were drawn from the disciplinary records of all 11,001 students in 19 middle schools in the district for the 1994-95 school year. Students were almost exactly evenly divided between grades six, seven, and eight, with four students listed as being in grade nine. Male students accounted for 51.8 % (5,698) of the participants compared to 48.2% female (5,303) participants in the study. The majority of students were categorized as either black (56%) or white (42%). Latino students represented 1.2% of the middle school population, while 0.7%

of the students were designated Asian American and 0.1% were described as Native American. Students in general education accounted for 83.2% (9,095) of the middle school population, while a total of 2,006 (16.8%) students were eligible for special education services. The largest special education category in the district was comprised by the 982 (9.8%) students with learning disabilities; there were 580 students with mild or moderate mental handicaps (5.3%) in the sample, 193 (1.8%) students classified as emotionally handicapped, and 85 students (0.8%) classified as communication handicapped.

Information on socioeconomic status was represented by qualification status for free or reduced cost lunch. Of the entire sample, 7,287 (65.3%) students' families met the criteria required for free lunch status. Another 2, 923 (26.6%) students were eligible for reduced cost lunch. Students either not eligible for free or reduced lunch or for whom meal status data were not recorded represented 8.1% (891) of the total number of students.

The 19 middle schools were located in a predominantly urban setting. Of the 19 public middle schools, four had less than 400 students, 11 schools had student bodies ranging from 400 to 800, and four had a school population greater than 800.

Procedures

The disciplinary data were drawn from an extant data collection system for recording disciplinary contacts in the district. When a formal referral was made to the office of any of the middle schools, a standardized coding form was filled out by the administrator receiving the referral. The form included information regarding the nature of the incident triggering the referral and the resulting action taken by the administrator. Other general information reported

on the coding form were referral date and time, by whom and to whom the referral was made, previous actions taken, date of administrative action, and whether parents were contacted. Data were scanned, organized and maintained in a central database by the district's research and data team.

Information about disciplinary referrals and consequences was based on the district's disciplinary policy, as outlined in the disciplinary handbook. There were 33 reasons for referral listed on the coding sheet (complete listings of these variables may be found in Skiba et al., 1997). The coding form required that at least one reason for referral be marked, with an option of applying up to two secondary codes. Only the primary reason for referral is included in these analyses. The category "Other" was dropped for purposes of the current analyses, leaving 32 reasons for referral. In terms of sanctions, only out-of-school suspensions and school expulsions were analyzed in this investigation.

After obtaining appropriate human subjects and district clearance and removing individual identifying information, disciplinary incidents files were transferred from the district's mainframe computer, along with registration data for all middle school students in the district. The data on these records encompass all middle school students formally registered at one of the 19 middle schools during the 1994-1995 academic year. The registration and disciplinary incidents files were merged, so as to include those students who were registered as attending one of the 19 middle schools, but who did not have a disciplinary incident during the course of the school year.

Analyses

The data as originally transferred from the district data base were based on disciplinary infraction as the unit of analysis. For purposes of the present investigation, the data were aggregated so that student became the unit of analysis. Because gender, race and socioeconomic status have all demonstrated evidence of disproportionate representation in previous investigations, disparities for all three were explored in this data set, in terms of number of office referrals, suspensions, and expulsions.

Disproportionality as a statistical artifact. Reschly (MacMillan & Reschly, 1998; Reschly, 1997) has documented substantial inconsistencies in the display and analysis of data concerning minority disproportionality in special education. He describes two common methods assessing disproportionate representation. The first compares the baseline ethnic distribution in the population with the ethnic distribution in the category under study (e.g., African Americans represent 17% of the population, but 23% of those labeled emotionally disturbed in special education); the second is the absolute proportion of a population being served in a category (e.g., of the entire population of African American students, 1.2% are enrolled in programs for students with emotional disturbance). While failure to clearly specify which method is being applied will create confusion, it is unclear whether simply changing the dimension of reporting will affect the conclusions drawn from a statistical analysis of the data. Thus for all disciplinary measures (office referrals, suspensions, and expulsions) disproportionality figures will be presented using both methods.

There appears to be no single criterion for determining how large a discrepancy constitutes over or underrepresentation. To test of the robustness of findings of

disproportionality across different methodological approaches, both the 10% of population proportion (Reschly, 1997) and chi-square tests were applied for all analyses.

Statistical analyses. As a second alternative hypothesis, we explored the extent to which disparities in discipline by race and gender can be explained by discrepancies in socioeconomic status. Free or reduced lunch status served as a proxy variable for socioeconomic status, entered in a two-factor (race, gender) analysis of covariance predicting a number of disciplinary outcomes. Effect sizes were computed from the *F* ratios using procedures recommended by Cooper (1998). Comparison of the effect sizes drawn from the unadjusted means to effect sizes drawn from means adjusted for the covariate provided an index of the extent to which the covariate, free lunch status, reduced the mean difference between black and white students on disciplinary measures.

Finally, discriminant analysis (Huberty, 1994; Lachenbruch, 1975) was used to explore the types of infractions that differentiate black and white referrals to the principal's office. Discriminant analysis is specifically designed to clarify the relationship between the response variable (types of infractions) and a grouping variable with a small number of categories (ethnicity), by creating a linear combination of the response variables that best identify the differences among groups. As such, the procedure is better suited to the problem addressed herein (e.g. differentiating black and white students on types of referrals) than logistic regression, which differentiates presence or absence within a single variable. One of the advantages of discriminant is that the grouping variable can be of any level of measurement. The grouping variable in many applications, including this one, is nominal. Lachenbruch (1975) and Huberty

(1994) report that discriminant performs reasonably well with nominal level variables.

Results

Table 2 presents descriptive comparisons of disciplinary measures broken down by gender, ethnicity, and socioeconomic status as represented by free lunch status. The upper half of the table represents the percentage of students disciplined represented by a given gender, ethnic, or lunch status category. For purposes of comparison, enrollment percentages are presented at the top of each column. Applying the 10% of the population proportion criteria to these data (Reschly, 1997), males and black students were over-represented on all measures of school discipline (referrals, suspensions, and expulsions), while females and white students were under-represented on all measures of school discipline. Disproportionality among males and African American students appears to increase as one moves from suspension to expulsion. All comparisons were statistically significant on chi-square tests at the $p < .01$ level.

Analyses in the upper half of Table 2 showed evidence of disproportionality by income level for most but not all disciplinary indices. All comparisons met or exceeded the 10% of population proportion criteria for over or underrepresentation, with the exception of office referrals for the category *reduced cost lunch.* Using chi-square tests, differences among the three SES groups were statistically significant for office referrals and school suspensions, but not expulsions.

Proportions of each group referred, suspended, and expelled are presented in the lower half of Table 2. All differences between the groups due to gender, ethnicity, and socioeconomic status are statistically significant for both proportion of the group referred to the office,

proportion suspended, and proportion expelled. Indeed, because proportions presented in the top and bottom half of Table 2 represent the row and column proportions of an n x n contingency table (e.g., race by presence/absence of suspension), all chi-square results for the top and bottom half of Table 2 were exactly the same.

A more detailed analysis of disciplinary referrals and consequences by gender and race can be found in Table 3. Across both office referrals and suspensions, there is a clear rank order from greatest to least frequency (black male, white male, black female, white female). Differences in the rate of office referrals were significant for both the main effects of race, F (3, 10,776) = 165.35, $p < .001$) and gender, F (3, 10,776) = 310.56, $p < .001$, as well as the interaction of the two variables, F (3, 10,776) = 6.19, $p < .05$. In terms of the likelihood of being suspended once referred to the office, boys were suspended at a significantly higher rate than girls given at least one office referral, F (3, 4457) = 4.19, $p < .05$). There were no statistically significant differences in proportion of incidents resulting in suspension by race or for the interaction of race and gender. Nor were there any significant race or gender differences in the mean number of days suspension assigned for those students who had been suspended. Effect sizes for all four measures are provided in Table 4 for both main and interaction effects.

Sources of Disproportionality

Since low-income students appear to be subjected to a variety of school sanctions in disproportionate numbers, some have suggested that racial disproportionality in suspension and expulsion is due in large measure to the correlation in most schools between race and socioeconomic status and that, if income status were controlled, racial disparities in disciplinary

statistics would disappear (National Association of Secondary School Principals, 2000). To test this hypothesis, the mean differences in Table 3 were retested using a two factor analysis of covariance. The criterion measures were the four measures of discipline (referrals, suspensions, proportion of referrals suspended, mean days suspended), the two factors were race (black, white) and gender (male, female); socioeconomic status was controlled by using lunch status as a covariate. Across all four variables, the addition of lunch status as a covariate resulted in no change in significance for any of the analyses. Effect sizes for main effects and interactions adjusted by the covariate lunch status are presented in column two of Table 4. Comparison of unadjusted and adjusted effect sizes shows only a minimal influence of socioeconomic status on race or gender differences on any disciplinary measure.

While differences in the rate of referral to the office were statistically significant for both race and gender, there were no significant differences by race in variables connected with the disposition of referrals at the office level (e.g. mean number of days suspended). This pattern of results may suggest that highly disparate rates of suspension for black and white students in this sample may be due in large part to prior disproportionate representation in office referrals. As a further test of this hypothesis, mean differences by race and gender in number of suspensions were retested with analysis of covariance, using frequency of office referral as a covariate. Controlling for number of office referrals reduced previously significant mean differences in number of suspensions to non-significance for both gender, F (4, 10775) = 1.11, $p > .05$), race, F (4, 10,775) = 2.25, $p > .05$, and their interaction, F (4, 10775) = .001, $p > .05$. These reductions are also reflected in the decrease in suspension effect sizes for both race and gender to near zero

(see Table 4). These results suggest that disproportionality in school suspension for African American students can be accounted for in large measure by prior disproportionate referral of African American students to the office.

Discriminant Analyses: Testing Differences in Types of Referrals

Thus, while disproportionality in the use of suspension by gender and race does not appear to be a function of socioeconomic status, it does appear to be explainable by prior disproportionality in rates of referral to the office. Given that racial and gender differences in suspension rate appear to originate at the level of referral, it becomes important to further assess the sources of disparity in referral.

The ideal test of the hypothesis that a group of students are suspended disproportionately because of increased misbehavior would be to observe student classroom behavior and office referrals independently. Those data were not available for this study, nor are we aware of any other investigation that has reported both observational and office referral data. A less direct but probably satisfactory method for testing this hypothesis is to explore the types of behavior exhibited by black and white students resulting in their referrals to the office. Because boys and African American students are suspended at a higher rate than other students, one would expect them to engage in correspondingly higher rates of more serious infractions. Alternately, higher rates of referral for less serious offenses might suggest that racial or gender disproportionality in suspension reflects some systematic bias operating at the classroom level.

Differences in referrals by gender. A discriminant analysis (Huberty, 1994) was conducted to explore the extent to which the types of behaviors resulting in referral to the office

differed for middle school boys and girls (see Table 5). The sample consisted of all students who had received at least one referral to the office for a disciplinary infraction during the school year (n = 4513). The grouping variable was gender (0=male, 1=female). The response variables were the 32 reasons for office referral. With two conditions for the criterion variable, the analysis yielded a single canonical discriminant function. The Wilks' lambda associated with the function, a measure of residual discrimination after accounting for the variance of the entered variables, was relatively large (.952), but still statistically significant (χ^2 (df = 13) = 222.65, p < .001).[2]

Of greater interest for this analysis than the overall significance of the discriminant function were the specific reasons for referral that significantly differentiated between boys and girls. Variables entering the equation and measures of their respective strength are presented in Table 5. Reasons for referral that were significantly more probable for boys are represented with a negative sign, and for girls by a positive sign. While boys were referred to the office more often for a host of infractions ranging in seriousness from minor offenses to sexual acts, for only one infraction (truancy) were girls more likely to be referred to the office than boys.

Differences in referrals by race. A similar discriminant analysis was conducted to explore differences in the types of office referrals received by black and white students (see Table 6). The sample for this analysis consisted of all black or white students who had been referred to the office for a disciplinary infraction at least once during the course of the school year (n = 4461). The grouping variable was reported ethnic status (0=white, 1=black). The response variables were again the 32 reasons for office referral. Once again, the overall

discriminant function was highly significant in differentiating the two groups (χ^2 (df = 8) = 86.223, $p < .001$), although a large Wilks' lambda (.981) suggests that the proportion of overall variance accounted for was relatively small.[2]

Table 6 presents the reasons for referral that significantly differentiated black and white referrals. A positive sign indicates a greater likelihood of referral for black students, while a negative sign indicates a greater likelihood of referral for white students. Black students in this sample appear to be referred to the office for infractions that are both less serious and more subjective in their interpretation than white students. White students were significantly more likely than black students to be referred to the office for smoking, leaving without permission, vandalism, and obscene language. Black students were more likely to be referred for disrespect, excessive noise, threat, and loitering.

Discussion

The findings of this study were consistent with a large body of previous research in finding racial and gender overrepresentation across a variety of school consequences. Previous ethnographic studies of secondary school students in both urban and small town school systems have reported that students consistently perceive that students of color and those from low-income backgrounds are more likely to experience a variety of school punishments (Brantlinger, 1991; Sheets, 1996). Unfortunately, results both in this study and in previous research going back at least 25 years are consistent with those perceptions.

In and of itself, disproportionate representation in school discipline is not sufficient to prove bias. Rather, determinations of bias might be seen as probabilistic: that is, as more

alternative hypotheses that might explain disproportionality can be discounted, the greater the likelihood that statistical disparities between groups represent some form of systematic bias. The primary purpose of this investigation was to explore a number of alternative hypotheses that have been used to account for racial and gender disparities in school discipline.

A serious threat to determining bias in disproportionality data is the methodology itself. Studies reporting on minority overrepresentation are often highly inconsistent in the presentation or analysis of their results, both across and even within studies (MacMillan & Reschly, 1998; Reschly, 1997). It is conceivable that apparent discrepancies between groups on one or more measures of school discipline are simply artifacts of the method of data presentation or analysis chosen. Thus, we presented the data in two different formats, designed to answer two different questions. The first is "what percentage of students assigned a given punishment are African American, and does that percentage differ from their percentage in overall district enrollment?" The second is "what percentage of African American students were referred, suspended or expelled?" Statistical analysis of these two dimensions did not yield different results; indeed, it *could not* yield different results. In a two-by-two contingency table where race (black/white) represents the columns and school suspension (suspended/not suspended) the rows, percent of those suspended who are African American is represented by the rows across each column, and total percent of African Americans suspended is represented by the columns across rows. Thus, chi-square results for these two questions are by definition identical. We also used different statistical criteria to test whether the observed disparities found for gender, race, and socioeconomic status represent meaningful differences. For measures of SES, results indicated

some changes in the apparent extent of disparity depending upon the statistical criteria used, for both office referrals and expulsions. For both gender and race, however, all differences met the disproportionality criteria for all three disciplinary consequences (referral, suspension, and expulsion), regardless of the method of analysis.

Another rationale typically offered for racial disparity in school punishment is the socioeconomic explanation, based upon the unfortunate but consistent correlation between race and income level in American society. In its statement before the United States Commission on Civil Rights, the National Association of Secondary School Principals (2000) argued that racial disproportionality in the application of zero tolerance policies

> ...is not an issue of discrimination or bias between ethnic or racial groups, but a socioeconomic issue. As we have seen in the area of standards and assessments, the greatest predictor of a student's score is not race or ethnicity but the student's socioeconomic status. Therefore a higher incidence of ethnic and racial minority students being affected by zero tolerance policies should not be seen as disparate treatment or discrimination but in terms of an issue of socioeconomic status. (p. 3)

Yet the results of the current investigation are consistent with previous findings (Wu et al., 1982) in demonstrating that significant racial disparities in school discipline remain even after controlling for socioeconomic status. In this sample, an index of socioeconomic status had virtually no effect when used as a covariate in a test of racial differences in office referrals and suspensions. Indeed, disciplinary disproportionality by socioeconomic status appears to be a somewhat *less* robust finding than gender or racial disparity.

A number of findings in this study converge to suggest that gender and race disparities in school suspension are due, not to disposition at the administrative level, but to differences in the rate of initial referral to the office for black and white students. Mean rates of office referral showed large, statistically significant differences by both gender and race. Significant race by gender interactions in these analyses echo previous findings (Gregory, 1996; Taylor & Foster, 1986) in suggesting a consistent rank ordering in the likelihood of office referral: black male, white male, black female, white female. In contrast, measures reflecting the administrative disposition of the disciplinary referral showed no evidence of disproportionality; although boys were slightly more likely than girls to be suspended once referred to the office, administrative actions taken in response to the referral (e.g., mean number of days suspended, probability of suspension given a referral) showed almost identical means for white and black students in the current study. Furthermore, significant racial and gender differences in the rate of suspension disappeared when controlling for rate of office referral. Thus, administrative decisions regarding school discipline in this sample did not appear to be unfair in themselves; rather, school suspension may function primarily to "pass along" the disproportionality that originates in referrals at the classroom level.

Discriminant analysis describing gender differences in office referrals revealed that boys in this sample were more likely than girls to be referred to the office for a host of misbehaviors ranging from minor offenses and throwing objects, to fighting and threats, to sexual offenses. On only one of the 32 possible reasons for referral, truancy, were girls more likely to be disciplined than boys. These findings are consistent with higher prevalence rates for boys across a range of

externalizing behaviors and syndromes, including aggression (Parke & Slaby, 1983), bullying (Boulton & Underwood, 1992), school violence (Walker, Ramsey & Colvin, 1995), theft and lying (Keltikangas & Lindeman, 1997), conduct disorders (American Psychiatric Association, 1994), and delinquency (Mears, Ploeger, & Warr, 1998). Boys have higher rates of suicide completion (Brock & Sandoval, 1997) and higher rates of referral to residential treatment centers for emotional and behavioral disorders (Wells & Whittington, 1993) than girls. For the one infraction elevated for girls in this sample, truancy, previous findings regarding school avoidance and school refusal appear to be inconsistent in terms of gender differences, with some researchers finding an equal distribution, and others finding higher rates for boys or girls (Paige, 1997). It seems probable, then, that elevated rates of disciplinary referral for boys are not due simply to gender bias; rather, they appear at least in part to be an accurate response to what both the current data and previous research suggests is a higher rate of engagement by boys in a wide range of major and minor misbehavior.

A similar analysis was used to test the proposition that disproportionate rates of office referrals, suspensions, and expulsions among African American students do not represent bias, but an appropriate response to higher rates of disruptive behavior among African American students. We are unaware of any empirical findings that support this proposition, although there appear to be some that contradict it. Shaw and Braden (1990) reported that although black children received a disproportionate share of disciplinary referrals and corporal punishment, white children tended to be referred for disciplinary action for more severe rule violations than black children. In a longitudinal study of secondary school students, McCarthy and Hoge (1987)

found that black students reported receiving higher rates of sanctions for all disciplinary measures studied; yet the only two behaviors that showed significant differences between white and black students across both years of that study—"skipped class" and "carved desk"—indicated higher rates of misbehavior for white students. Studying disciplinary referrals across all grades in a single school district, McFadden et al. (1992) reported that African American students were more often subjected to corporal punishment and suspension and less often referred for in-school suspension, and reported that:

> ...data from the disciplinary files indicate that corporal punishment was administered more frequently for defiance of school authority, fighting, and bothering others. A review of the data indicates that white pupils were referred for these acts more frequently than black pupils and, thus, should have received higher rates of corporal punishment.... The fact that black pupils received higher rates of corporal punishment does not appear to be explainable in terms of their behavior; rather some form of bias does appear to have existed. (p. 144)

Data from the current investigation are consistent with previous investigations in finding that African American students were subjected to higher rates of more severe punishments, yet referred for less serious disciplinary infractions. Discriminant analysis for black and white students in this sample indicated that the two groups could be significantly differentiated on type of referral to the office. In striking contrast to the gender analyses, however, the group with the higher rate of office referrals was not referred for more serious behaviors. White students were

significantly more likely to be referred to the office for smoking, leaving without permission, obscene language, and vandalism. In contrast, black students were more likely than white students to be referred to the office for disrespect, excessive noise, threat, and loitering, behaviors that are at once less serious and more subjective in their interpretation. Even the most serious of the reasons for office referrals among black students, *threat*, is dependent on perception of threat by the staff making the referral. Far from supporting the hypothesis that African American students act out more frequently, these and other data suggest that African American students are disciplined more frequently and harshly for less serious, more subjective reasons.

Together, these explorations of three alternative hypotheses for disproportionality point to important differences in the sources and meaning of socioeconomic-, gender-, and race-based disparities in school discipline. In terms of the first hypothesis, concerning methodology, apparent disproportionality due to SES is to some extent dependent on the methodology applied. In contrast, findings of overrepresentation by gender and race in school discipline are consistent regardless of measure or statistical criteria. The second hypothesis, that apparent racial disproportionality is due to correlation with socioeconomic factors, received no support in this investigation: Racial and gender disparities persist after controlling for socioeconomic status. Finally, analyses testing the third hypothesis, that disproportionality is due to disproportionate rates of misbehavior, provided a striking contrast for gender and race. Our findings that boys are referred more often for a host of major and minor disciplinary infractions replicated extensive findings on gender differences in externalizing behavior, suggesting that disproportionate

discipline for boys appears to be an appropriate response to higher rates of disruptive behavior among boys. There is no such support for a similar racial hypothesis. Neither these nor any previous results we are aware of provide any evidence that racial discrepancies in school punishment can be accounted for by disproportionate rates of misbehavior. Rather African American students are referred for and subjected to more severe consequences for less serious and more subjective reasons. Thus, of the three dimensions tested in this study—gender, race, and socioeconomic status—only disparities due to race persist regardless of level of analysis. Absent support for any plausible alternative explanation, these data lend support to the conclusion that racial disproportionality in school discipline, originating at the classroom level, *is* an indicator of systematic racial discrimination.

It seems likely that racial inequity in the practice of school discipline is nested within the context of the overuse of school suspension in general. There appears to be tremendous variability by school in the use of school suspension (Massachusetts Advocacy Center, 1986). At least some of this variability appears to be attributable to variation in school practices and school climate. Wu et al. (1982) reported a significant negative relationship between quality of school governance and the prevalence of school suspension. Davis and Jordan (1994) reported high suspension rates in schools spending excessive amounts of time on discipline-related matters. In an extensive comparison of schools with high and low use of school suspension, Bickel and Qualls (1980) found no differences between high and low suspension schools in school size, geographic location, or racial proportion of the student body, but did report that low suspension schools paid significantly better attention to issues of school climate, according to administrators,

teachers, and students. In particular, administrators in high and low use schools differed significantly in the areas of communication, management, decision making, and leadership style.

The disproportionate discipline of minority students appears to be to some degree associated with this over-reliance on negative and punitive discipline. There is some evidence that schools with the highest rate of suspension in general also have the highest rates of overrepresentation of African American students in suspension (Advancement Project, 2000; Massachusetts Advocacy Center, 1986). Bullara (1993) argues that the typical classroom management style in many schools, relying heavily on negative consequences, contributes to school rejection and dropout for African American youth; for such students, "the choice of either staying in school or dropping out may be less of a choice and more of a natural response to a negative environment in which he or she is trying to escape" (p. 362). Indeed, Felice (1981) found significant relationships in urban schools among high rates of minority suspension, minority dropout rate, and student perceptions of racial discrimination.

Student reactions to a negative climate and classroom management may be exacerbated by cultural discontinuities that place African American students, especially African American male adolescents, at a disadvantage in many secondary classrooms. Townsend (2000) suggests that many teachers, especially those of European American background, may be unfamiliar and even uncomfortable with the more active and physical style of communication that characterizes African American adolescents; the impassioned and emotive manner popular among young African Americans may be interpreted as combative or argumentative by unfamiliar listeners. Fear may also contribute to over-referral. Teachers who are prone to accepting stereotypes of

adolescent African American males as threatening or dangerous may overreact to relatively minor threats to authority, especially if their anxiety is paired with a misunderstanding of cultural norms of social interaction.

This cycle of fear and cultural discontinuity can create tension and conflict between students and school staff. Sheets (1996) reported that both majority and ethnically diverse students in an urban high school perceived sources of racism in the application of discipline. But while white students and teachers perceived racial disparity in discipline as unintentional or unconscious, students of color saw it as conscious and deliberate, arguing that teachers often apply classroom rules and guidelines arbitrarily to exercise control, or to remove students whom they do not like. In particular, African American students felt that contextual variables, such as a lack of respect, differences in communication styles, disinterest on the part of teachers, and "being purposefully pushed to the edge where they were expected and encouraged to be hostile" were the primary causes of many disciplinary conflicts (Sheets, p. 175).

Teacher training in appropriate and culturally competent methods of classroom management is likely then to be the most pressing need in addressing racial disparities in school discipline. Although consistently rated as among the most important teaching skills by both regular and special education teachers (J. Brown, Gable, Hendrickson, & Algozzine, 1991; Canon, Idol & West, 1992; Mandell & Strain, 1978; Myles & Simpson, 1989), classroom teachers report feeling most underprepared in the area of classroom management (Calhoun, 1986; Leyser, 1988). Ill-equipped to handle the challenges of disruptive classroom behavior, inexperienced teachers may increasingly adopt an authoritarian approach to management, and

engage students in power struggles that serve only to escalate disruption (Emmer, 1994; Kearney, Plax, Sorenson, and Smith, 1988), especially in urban environments (Brophy & Rohrkemper, 1980). Appropriate training in constructive classroom management program, appropriate rules adequately communicated to students, and the support of mental health staff and administration can all assist in developing a more supportive classroom environment (Bullara, 1993).

In particular, effective teacher training will focus on culturally competent practices that enable new teachers to address the needs of a diverse classroom. Townsend (2000) suggests a number of important components that may reduce cultural discontinuity and enhance the educational experience of African American students, including relationship-building strategies, knowledge of linguistic or dialectic patterns of African American youth, increased opportunity for participation in a range of school activities, and family and community partnerships. Finally, effective preparation for teaching diverse students goes beyond "feel-good" or single issue approaches to teaching awareness and tolerance (Banks, 1996; Nieto, 1994) to include a range of skill instruction and experiences. For example, Leavell, Cowart, and Wilhelm (1999) describe a multi-component training program to enhance the multicultural awareness of pre-service teachers in the Dallas Public Schools, focusing on pedagogical and community awareness, exposure to diverse communities, instructional practice, and experiences that challenge students to examine previously held assumptions.

Racial bias in the practice of school discipline is also part of a broader discourse concerning the continuing presence of institutional racism (Hannssen, 1998) or structural inequity (Nieto, 2000; Skiba, Bush, & Knesting, in press) in education. The theory of cultural

reproduction has proven useful in explaining the contribution of school-based inequity to the perpetuation of racial and socioeconomic inequality. As originally formulated (Bowles & Gintis, 1976; Bernstein, 1977; Spring, 1972), cultural reproduction theory argued that schools serve as institutional mechanisms for the transmission and perpetuation of differential social class values. Oakes (1982) expanded the formulation beyond a solely economic analysis, suggesting that both ethnic and class disparities are perpetuated through pervasive inequity across a variety of educational processes. Racial and socioeconomic inequality in educational opportunity have been extensively documented in areas as diverse as tracking (Alexander, Cook, & McDill, 1978; Oakes, 1982), representation in curriculum (Anyon, 1981; Sleeter & Grant, 1991), quality of instruction (Greenwood, Hart, Walker, & Risley, 1994), physical resources (Kozol, 1991; Oakes, Ormseth, Bell, & Camp, 1990), and school funding (Rebell, 1999; Singer, 1999). Thus, the discriminatory treatment of African American students in school discipline is not an isolated phenomena, but appears to be part of a complex of inequity that appears to be associated with both special education overrepresentation and school dropout (Gordon, Della Piana, & Keleher, 2000). These sources of institutional inequity persisting throughout public education do not typically rise to the conscious level, yet they have the effect of reinforcing and perpetuating racial and socioeconomic disadvantage. Bowditch (1993) argues that, whether or not discrepancies in school discipline are fact racially motivated, the overrepresentation of African Americans and those of lower socioeconomic status in school discipline contributes to racial stratification in school and society.

In this context, reducing the disciplinary gap between black and white students may

require attention to broad-scale systemic reform whose goal is to equalize educational opportunity for all students. Hilliard (1999) argues for a shift in emphasis in urban education away from the linguistic or cultural "deficits" of minority students toward improving the quality of educational service for all children. O. Brown and Peterkin (1999) propose an integrated strategy of public schools, particularly urban schools, designed to address a broad range of factors that appear to be maintaining racial and socioeconomic inequity; these include developing a set of districtwide academic standards and priority goals, administrative restructuring to increase resources to schools rather than the central office, developing procedures that ensure equitable resource distribution across schools, school resource inventories, and a methodology for implementation and evaluation across schools. In some cases, systemic reform may require litigation in order to overcome institutionalized practices that contribute to educational inequity; such efforts to challenge inequitable practices legally are beginning to be documented in the areas of tracking (Welner & Oakes, 1996) and resource availability (Dunn, 1999).

In summary, the current results are highly consistent with a large body of previous literature in finding that schools and school districts that rely to a significant degree on suspension and expulsion as their primary disciplinary tools run a substantial risk of minority disproportionality, especially for African American students, in the application of those punishments. This investigation explored a number of alternatives to bias as an explanation for gender, race, and socioeconomic disproportionality, and found that none were capable of accounting for large and consistent disparities in the discipline of black and white students. In the absence of a plausible alternative hypothesis, it becomes likely that highly consistent

statistical discrepancies in school punishment for black and white students indicate a systematic and prevalent bias in the practice of school discipline.

Indeed, the universality of racial disparities in school punishment suggests that some form of systematic bias is inherent in the use of school suspension and expulsion. As the widespread acceptance of zero tolerance disciplinary strategies continues to expand the use of exclusionary discipline (Advancement Project, 2000), one can expect a concomitant increase in the documentation of discriminatory treatment of African American students. Reducing the discrepancy between black and white rates of suspension will likely require increased attention to teacher training in effective and culturally competent methods of classroom behavior management. Further, research is needed to identify effective systemic reforms that can reduce disciplinary inequity and increase educational opportunity for disadvantaged students.

While we have tried to examine the phenomena of disproportionate representation in school discipline in greater detail than previous investigations, it should be noted that these findings still do not constitute an absolute proof of racial discrimination. It is possible that there are other hypotheses not examined here that could account for these and other disparities due to race, gender, or SES. We did, however, address three of the most common explanations offered for findings of disciplinary disproportionality. If there are other explanations for racial disproportionality in school discipline, they have not yet been widely represented in the literature. In addition, the current results are not idiosyncratic, but are highly consistent with a fairly substantial body of previous findings. In particular, we were struck during the preparation of this manuscript by the virtual absence of empirical support for the popular hypothesis that African

American students are disciplined more because they act out more.

Indeed, given the regularity with which findings of racial disproportionality in discipline are reported, and the lack of a suitable alternative explanation, we would argue that the most critical questions that remain to be addressed in this area do not concern the data per se. Rather, it might be more fruitful to explore the prepotent tendency to minimize disproportionality data. Why do advocates of students of color need to prove that African American students are not deserving of disproportionate treatment? Will the data ever be sufficient to provide convincing proof of racial bias for those who believe that discrimination is no longer an issue in American society? What will it take to persuade the American public in general, and policymakers in particular, of the need to confront racial disparities in public education and ensure equal access to educational opportunity for all children, regardless of the color of their skin?

Footnotes

[1] In this manuscript, we will use terms suggested by Nieto (2000) for labeling racial categories (e.g., *African American* and *European-American*) whenever speaking of those students in themselves, without comparison. But since those terms are somewhat cumbersome for purposes of comparison, particularly in tables, we will use the terms *black* and *white* when comparing populations.

[2] Wilks lambda is a measure of inverse proportion describing the residual variance available after the entry of the independent variables. The large yet significant Wilks lambda for this sample suggests both that there is a large proportion of unaccounted variance in describing the difference between these two populations *and* that the variables entered in this function do discriminate significantly between the two populations. Given that the dependent variables being discriminated in these analyses are gender and race, the finding that there are other factors unmeasured in the current analysis that account for a large proportion of the difference between groups is obvious, perhaps to the extent of being trivial. Thus, the more important information, presented in Tables 3 and 4, is the relative contribution and sign of the variables that made a significant contribution to the discriminant function.

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Table 1. Investigations of Minority Disproportionality in Office Referral, Suspension, and Expulsion

A. Data Indicating Disproportionality in Suspension or Other Disciplinary Action

STUDY	LOCATION & DATA SOURCE	SAMPLE	PERCENTAGE OF ENROLLMENT	PERCENTAGE RECEIVING DISCIPLINARY ACTIONS
Costenbader & Markson (1998)	One urban and one rural school district; school district records	620 middle and high school students	White 50% African American 23% Hispanic 8%	Suspension: White 12% African American 45% Hispanic 18%
Gordon, Della Piana, & Keleher (2000)	Twelve major urban school districts; suspension and expulsion data	All students who were suspended or expelled	Percentages varied across the 12 cities. Examples are: Boston White 13% African American 55% Hispanic 23% Los Angeles White 11% African American 14% Hispanic 69%	Suspensions and Expulsion Data for selected cities: Boston White 9% African American 70% Hispanic 19% Los Angeles White 8% African American 30% Hispanic 85% (Note: In the 12 cities studied, the proportion of African American students suspended or expelled exceeded their representation in the population by between 14% and 296%.)
Massachusetts Advocacy Center (1986)	Boston; central administration records from 1985	All suspension data from seven middle schools over three schools years	African American 49.8%	Suspension: African American 63.8%

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STUDY	LOCATION & DATA SOURCE	SAMPLE	PERCENTAGE OF ENROLLMENT	PERCENTAGE RECEIVING DISCIPLINARY ACTIONS
McFadden, Marsh, Price, & Hwang (1992)	South Florida; discipline files from the 1987-88 school year	4,391 disciplined students in grades K through 12	White 58% African American 22% Hispanic 18% Other 2%	Suspension: White 35% African American 44% Hispanic 20.6% Other .5% Corporal Punishment: White 33.1% African American 54.1% Hispanic 11.8% Other 1%
Taylor & Foster (1986)	Southeastern United States; suspension records of a medium sized school district for 1983-84 school year	All suspension records	Elementary: African American 44% Secondary: African American 45%	Elementary Suspensions: African American 67.4% Secondary Suspensions: African American 59%
Thornton & Trent (1988)	East Baton Rouge Parish, LA secondary school records 1981-82 school year	32,210 school suspension records	White 58.7% African American 42%	Suspensions: White 33% African American 66%

Table 1. Investigations of Minority Disproportionality in Office Referral, Suspension, and Expulsion (Cont'd)

B. Percent of Group Suspended

STUDY	LOCATION & DATA SOURCE	SAMPLE	PERCENT OF GROUP SUSPENDED
Kaeser (1979)	United States and Ohio's seven largest city school districts; 1975 Office of Civil Rights school survey	All students in the nation; all students in the Ohio districts	Nationwide: African American 6% White 3.1% Ohio's 7 largest city school districts: White 5.6%-16.7% African American 13.3%-24.7%
Wu, Pink, Crain, & Moles (1982)	Self-administered questionnaires of principals, teachers, and students as part of the Safe School Study (National Institute of Education, 1978)	Principals, teachers (23, 895), and students (31,103) from 641 public secondary schools (seventh through twelfth grades) in the U.S.	White 5%-11% African American 15%-23% Hispanic 8%-17% Asian American and Pacific Islanders 6%-11% Native Americans 5%-23% Other Minorities 7%-14%

Table 1. Investigations of Minority Disproportionality in Office Referral, Suspension, and Expulsion Other Relevant Findings (Cont'd)

C. Other Relevant Findings

STUDY	LOCATION & DATA SOURCE	SAMPLE	FINDINGS
Cooley (1995)	Kansas; survey results from principals of middle, junior high, and high schools	1,094 incidents from principal report of the last three students suspended or expelled at their school	African American and Hispanic students were only slightly over represented among those suspended or expelled. This difference was not significant (χ^2).
Costenbader & Markson (1994)	National survey sampling two states in each of five geographical regions	Principals and Assistant Principals from 349 Middle and High schools	Respondents reported that African American students were suspended in numbers significantly disproportionate to their total enrollment (t-test).
Gregory (1997)	Nationwide data; 1992 Office for Civil Rights school survey	25+ million students, representing 59% of the total enrollment of U. S. public schools in 1992	African American males were more likely to be suspended than all other index groups ranging from 1.71 times more likely than Hispanic and American Indian males, to 10.14 times more likely than Asian females (Likelihood ratios).
Lietz & Gregory (1978)	Milwaukee; discipline files from one public elementary school for 1975-76 school year	397 students	African American students were referred to the office for disciplinary reasons significantly more often than white children (χ^2).
McCarthy & Hoge (1987)	Self-reported school suspension of students over two school years (1976-77, 1977-78)	945 junior high and high school students	Occurrence of suspension rated using a Likert scale (0=never and 5=once a month or more). Average African American student score for suspension was .94 (year 1) and .92 (year 2). Average white student score for suspension was .48 (year 1) and .54 (year 2). Difference was significant at .001 level for both years (t-test).

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STUDY	LOCATION & DATA SOURCE	SAMPLE	FINDINGS
Nichols, Ludwin, & Iadicola (1999)	Large metropolitan city in the Midwest; enrollment and suspension data	15,400 middle and high school students	Although enrollment was made up of 74% majority student 23% minority students, minority students received 2.76 times as many suspensions as majority students.
Skiba, Peterson, & Williams (1997)	Midwestern city school district; all disciplinary records from a from the 1994-95 school year	11,001students (6th through 9th grade)	African American students received a significantly higher number of average referrals and significantly more suspensions than students from other ethnic backgrounds (ANOVA).

Table 2. Disproportionality on Various Disciplinary Indices by Gender, Race, and Socioeconomic Status.

Analysis	Gender		Racial Status		Free/Reduced Cost Status (SES)		
	Male	Female	Black	White	Free	Reduced	Not Eligible
			% of Total Represented by Group [a]				
% of Enrolled (n=11,001)	51.8%	48.2%	56.0%	42.0% [b]	64.8%	8.0%	27.2%
% of Referred (n=4,513)	63.0%	37.0%	66.1%	32.7%	71.4%	7.4%	21.4%
Discrepancy	*+11.2%*	*-11.2%*	*+ 11.1%*	*- 7.3%*	*+ 6.6%*	*- 0.6%* [+]	*- 5.8%*
% of Suspended (n=2,476)	67.2%	32.8%	68.5%	30.9%	74.5%	7.1%	18.4%
Discrepancy	*+15.4%*	*-15.4%*	*+ 13.5%*	*- 9.1%*	*+ 9.7%*	*- 0.9%*	*- 8.8%*
% of Expelled (n=43)	83.7%	16.3%	80.9%	17.0%	74.4%	11.6%	14.0% [x]
Discrepancy	*+31.9%*	*-31.9%*	*+24.9%*	*-25.0%*	*+ 9.6%*	*+ 3.6%*	*-13.2%*
			% of Group Receiving Disciplinary Consequence [c]				
% of Group Referred	49.9%	31.5%	48.4%	21.4%	45.6%	38.5%	32.8%
% of Group Suspended	29.2%	15.3%	27.0%	17.1%	25.9%	19.9%	15.2%
% of Group Expelled	0.6%	0.1%	0.6%	0.2%	0.4%	0.6%	0.2% [x]

Note. All comparisons (gender, ethnic status, SES) of Percentage of Total Represented by Group were significant at $p < .01$ level on

chi-square tests except for percentage of expulsions for SES comparison.

[a] Represents percentage of disciplinary incidents accounted for by the index group. Discrepancy is the difference between proportion of incidents accounted for and percentage of total enrollment.

[b] Proportions represent only black and white students. Given that the remaining 2% of students were represented by students in other ethnic categories, percentages in this column will not total to 100%, nor will discrepancies with enrollment figures be reciprocal of one another.

[c] Represents percentage of index group receiving each disciplinary consequence. Statistical significance represented as above.

[+] Does not reach the disproportionality criteria of 10% plus or minus the population proportion (Reschly, 1997).

[x] No significant difference in expulsions by socioeconomic status, $p > .05$. All other chi-square tests were significant at the $p < .05$ level.

Table 3. Mean Rates of Occurrence for Various Disciplinary Indices: Race and Gender Comparisons

Measure	Total Sample		Black		White	
	Mean	*n*	Mean	*n*	Mean	*n*
Office Referrals Per Student						
Male	2.08	*5585*	2.50	*3187*	1.53	*2398*
Female	.98	*5195*	1.26	*2978*	.61	*2217*
Total	**1.55**	***10780*** [a]	**1.90**	***6165***	**1.09**	***4615***
Suspensions Per Student						
Male	0.72	5585	0.85	*3187*	0.54	*2398*
Female	0.32	5195	0.40	2978	0.20	*2217*
Total	**0.53**	***10780*** [a]	**0.63**	***6165***	**0.38**	***4615***
Proportion of Referrals Suspended						
Male	0.34	*2802*	0.33	*1811*	0.35	*991*
Female	0.31	*1659*	0.31	*1173*	0.30	*486*
Total	**0.33**	***4461*** [b]	**0.32**	***2984***	**0.33**	***1477***
No. of Days Per Suspension						
Male	2.38	*1698*	2.39	*1106*	2.38	*592*
Female	2.33	*840*	2.36	*609*	2.18	*231*
Total	**2.36**	***2538*** [c]	**2.38**	***1715***	**2.33**	***823***

[a] Includes total number of black or white students, including those with no office referrals.
[b] Includes only those students who were referred to the office one or more times during the school year.
[c] Includes only those students who were suspended one or more times during the school year.

Table 4. Unadjusted and Adjusted Effect Sizes for Race and Gender Differences on Various Disciplinary Indices

Measure	Unadjusted *d*	*d* Adjusted for Lunch Status [a]	*d* Adjusted for # of Referrals
Office Referrals Per Student			
Race	.248	.206	---
Gender	.340	.350	---
Race X Gender Interaction	.048	.050	---
Suspensions Per Student			
Race	.252	.196	.025
Gender	.400	.405	.020
Race X Gender Interaction	.055	.057	.001
Proportion of Referrals Suspended			
Race	.020	.038	---
Gender	.061	.066	---
Race X Gender Interaction	.034	.033	---
No. of Days Per Suspension			
Race	.029	.040	---
Gender	.058	.056	---
Race X Gender Interaction	.075	.063	---

[a] Effect size was calculated from *F* ratios for main effects and interactions, adapted from Cooper (1998):

$$d = \frac{2\sqrt{F}}{\sqrt{df_{error}}}$$

where F = the value of the F test for the associated comparison; and
df_{error} = the error degrees of freedom associated with the F test.

Table 5. Discriminant Function Analysis Predicting Gender by Reason for Office Referral

Reason for Referral	Variables Predicting Male Referral		Variables Predicting Female Referral	
	DFA Coefficient[a]	Structure Matrix r[b]	DFA Coefficient	Structure Matrix r
Fighting	-.468	-.519		
Endangering	-.352	-.453		
Conduct Interference	-.208	-.375		
Throw/Propel Objects	-.255	-.345		
Gambling	-.332	-.341		
Threat	-.181	-.283		
Vandalism	-.204	-.260		
Sexual Acts	-.139	-.237		
Indecent Exposure	-.203	-.235		
Minor Offenses	-.176	-.232		
Spit	-.182	-.221		
Truancy			.230	.519

Note: Analysis based on the 4513 students who were referred to the office for a disciplinary violation one or more times during the school year. All variables significantly entered/remained in the discriminant function at $p < .05$ level or better. Overall discriminant function significantly distinguished between the two groups ($\chi^2 = 222.65$, $df=13$, $p < .001$). Positive and negative signs are arbitrary, based on coding of male as 0 and female as 1. Negative sign thus connotes significantly higher mean referrals for males, while positive signs indicate significantly higher referrals for female students.

a Represents standardized canonical discriminant function coefficient, transformed so that all variables have a mean of 0 and a standard deviation of 1. This coefficient might be regarded as an index of the relative importance of each variable in the function.

b Represents pooled within-group correlations between discriminating variables and standardized canonical discriminant function, and is an index of the degree of correlation of the variable with the function within each group.

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Table 6. Discriminant Function Analysis Predicting Ethnic Group Membership by Reason for Office Referral

Reason for Referral	Variables Predicting White Referral		Variables Predicting Black Referral	
	DFA Coefficient[a]	Structure Matrix r[b]	DFA Coefficient	Structure Matrix r
Smoking	-.681	-.680		
Left without Permission	-.228	-.205		
Vandalism	-.225	-.191		
Obscene Language	-.225	-.113		
Disrespect			.401	.429
Excessive Noise			.285	.355
Threat			.287	.291
Loitering			.235	.277

Note: Analysis based on 4461 African American or European-American students who were referred to the office for a disciplinary violation one or more times during the school year. All variables significantly entered/remained in discriminant function at $p < .05$ level or better. Overall discriminant function significantly distinguished between the two groups ($\chi^2 = 86.22$, $df=8$, $p < .001$). Positive and negative signs are arbitrary, based on coding of white students as 0 and black students as 1. Negative signs thus connote significantly higher mean referrals for white students, while a positive sign indicates significantly higher referral rate for black students.

a Standardized canonical discriminant function coefficient.

b Pooled within-group correlations between discriminating variables and standardized canonical discriminant function.

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